

Title (en)

DEVICE AND METHOD FOR SYNCHRONIZING A HIGH FREQUENCY POWER SIGNAL AND AN EXTERNAL REFERENCE SIGNAL

Title (de)

VORRICHTUNG UND VERFAHREN ZUR SYNCHRONISIERUNG EINES HOCHFREQUENZLEISTUNGSSIGNALS UND EINES EXTERNEN REFERENZSIGNALS

Title (fr)

DISPOSITIF ET PROCÉDÉ DE SYNCHRONISATION D'UN SIGNAL D'ALIMENTATION HAUTE FRÉQUENCE ET D'UN SIGNAL DE RÉFÉRENCE EXTERNE

Publication

**EP 3758235 A1 20201230 (EN)**

Application

**EP 19182214 A 20190625**

Priority

EP 19182214 A 20190625

Abstract (en)

The invention relates to a device for synchronizing a periodic high frequency power signal (18) and an external reference signal (10). The device comprises a phase control circuit (100) and a digital oscillator circuit (130). The digital oscillator circuit (130) is connected to the phase control circuit (100). The digital oscillator circuit (130) comprises means for generating the periodic high frequency power signal (18) dependent on the control signal from the phase control circuit. The phase control circuit (100) is configured to determine a phase difference of the periodic high frequency power signal (18) and the external reference signal (10).

IPC 8 full level

**H03L 7/099** (2006.01); **H01J 37/32** (2006.01)

CPC (source: EP US)

**H01J 37/32174** (2013.01 - EP); **H01J 37/3299** (2013.01 - EP); **H03L 7/093** (2013.01 - US); **H03L 7/0992** (2013.01 - US);  
**H03L 7/0994** (2013.01 - EP); **H03L 7/189** (2013.01 - US)

Citation (applicant)

- WO 2017001603 A2 20170105 - TRUMPF HÜTTINGER GMBH + CO KG [DE]
- US 6198353 B1 20010306 - JANESCH STEPHEN T [US], et al
- US 7250823 B2 20070731 - SHIELDS NICHOLAS PAUL [US]

Citation (search report)

- [XI] US 2013170512 A1 20130704 - SCHMELZER DAVID P [US], et al
- [IY] US 2011115467 A1 20110519 - SATO HIROAKI [JP]
- [Y] US 5774509 A 19980630 - FRIGERIO SILVANO [IT], et al
- [Y] US 6111471 A 20000829 - BONNEAU DOMINIQUE [FR], et al
- [A] US 2006232471 A1 20061019 - COUMOU DAVID J [US]

Cited by

CN115510388A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3758235 A1 20201230**; US 11489531 B2 20221101; US 11777508 B2 20231003; US 2020412372 A1 20201231;  
US 2022190835 A1 20220616

DOCDB simple family (application)

**EP 19182214 A 20190625**; US 202016904629 A 20200618; US 202217686665 A 20220304